CLAIMS

1. An information management apparatus for processing data containing personal data comprising:

personal data extraction means for extracting personal data from processingobject data;

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unique code generation means for performing an operation using one-way function on the basis of personal data extracted by said personal data extraction means, to generate a unique code; and

primary conversion data generation means for replacing personal data of said processing-object data with said unique code, to generate primary conversion data.

- 2. An information management apparatus as recited in claim 1, which further comprises storage means for storing said primary conversion data and said processing-object data on which said primary conversion data are based in a state in which these data are correlated with each other.
- 3. An information management apparatus as recited in claim 1, wherein said unique code generation means comprises a reference character string generation means for generating a reference character string from personal data extracted by said personal data

extraction means, and operation means for operating a predetermined processing-object character string by means of said one-way function using said reference character string as a key, to generate said unique code.

4. An information management apparatus as recited in claim 3, wherein said operation means comprises digit number determination means for determining an operation digit number on the basis of said reference character string, processing-object character string generation means for generating an processing-object character string having said operation digit number and operation execution means for operating said processing-object character string by means of said one-way function using said reference character string as a key.

5. An information management apparatus as recited in claim 1, which further comprises a secondary conversion data generation means for encrypting said primary conversion data to generate secondary conversion data, output means for outputting said secondary conversion data to other apparatus, and storage means for storing said outputted secondary conversion data, said primary conversion data on which said secondary conversion data are based, said processing-object data on which said primary conversion data are based and records of output from said output means in a state in which these data and records are correlated with one another when said secondary conversion data are

outputted from said output means.

An information management system which comprises an information management apparatus for processing data containing personal data and an information center apparatus for managing data processed with said information management apparatus, the information management apparatus and the information center apparatus being connected to each other through a communication line;

said information management apparatus comprising:

personal data extraction means for extracting personal data from processing-10 object data;

unique code generation means for performing an operation using one-way function on the basis of personal data extracted by said personal data extraction means to generate a unique code;

primary conversion data generation means for replacing the personal data of said processing-object data with said unique code to generate primary conversion data;

secondary conversion data generation means for encrypting said primary conversion data to generate secondary conversion data;

output means for outputting said secondary conversion data to said information management apparatus through said communication line; and

storage means for storing, when said secondary conversion data are outputted

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from said output means, said outputted secondary conversion data, said primary conversion data as an original of said secondary conversion data, said processing-object data as an original of said primary conversion data and records of the output made by said output means, in a state in which they are correlated with one another;

said information center apparatus comprising:

receiving means for receiving secondary conversion data transmitted from said information management apparatus; and

decryption means for decrypting secondary conversion data received by said receiving means to generate said primary conversion data.

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7. An information management system as recited in claim 6, wherein said information center apparatus further comprises data storage means for storing primary conversion data generated by said decryption means and processes data stored in said data storage means by means of said unique code as a key.

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- 8. An information management system as recited in claim 7, wherein said information center apparatus detects data containing the same unique code from a plurality of data containing said unique codes stored in said data storage means.
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- 9. A program for causing an information management computer for processing

data containing personal data to execute processing comprising the steps of:

extracting personal data from processing-object data by means of personal data extraction means,

performing an operation using a one-way function on the basis of the personal data extracted by said personal data extraction means by means of unique code generation means to generate a unique code, and

replacing personal data of said processing-object data with said unique code
by means of primary conversion data generation means to generate primary conversion
data.

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10. The program of claim 9, which is for causing said information management computer to execute the processing which further comprises the step of storing said primary conversion data and said processing-object data as an origin of said primary conversion data in storage means in a state in which they are correlated with each other.

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11. The program of claim 9, wherein the step of generating the unique code by said unique code generation means comprises the steps of:

generating a reference character string from personal data, which are extracted by said personal data extraction means, by means of a reference character string generation means; and

operating a predetermined operation-object character string by means of said one-way function using said reference character string as a key to generate said unique code.

The program of claim 11, wherein the step of generating said unique code with said operation means comprises the steps of:

determining an operation digit number on the basis of said reference character string by means of digit number determination means;

number by means of operation-object character string generation means; and

operating said operation-object character string by means of said one-way

function by operation execution means using said reference character string as a key.

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13. The program of claim 9, which is for causing said information management computer to execute the processing which further comprises the steps of:

encrypting said primary conversion data by means of secondary conversion data generation means to generate secondary conversion data;

outputting said secondary conversion data to other apparatus by output means; and causing storage means, when said secondary conversion data are outputted from said output means, to store said outputted secondary conversion data, said primary

conversion data as an origin of said secondary conversion data, said processing-object data as an origin of said primary conversion data and records of the output from said output means, in a state in which they are correlated with one another.